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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,756	02/11/2005	Noboru Hirano	043176	6886

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WASHINGTON, DC 20036

EXAMINER
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RECEK, JASON D

ART UNIT	PAPER NUMBER
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2142

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01/10/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/524,756	<b>Applicant(s)</b> HIRANO, NOBORU	
	<b>Examiner</b> Jason Recek	<b>Art Unit</b> 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

This is in response to Applicant's amendment filed on October 23<sup>rd</sup> 2007 which concerns application 10/524,746.

### ***Status of Claims***

Claims 1-12 are pending.

Claims 2, 4 and 11-12 are currently rejected under 35 U.S.C. 102(b).

Claims 1, 3-4 and 5-12 are currently rejected under 35 U.S.C. 103(a).

### ***Response to Arguments***

1. Applicant's arguments filed October 23<sup>rd</sup> 2007 have been fully considered but they are not persuasive.
2. The objections to the specification, drawings and claims have been withdrawn in light of Applicant's amendments.
3. The rejection of claims 1-11 under 35 U.S.C. 112 second paragraph has been withdrawn in light of Applicant's amendments / arguments.

4. Applicant argues that Yoshinori does not disclose a transmitting terminal that determines the degree of congestion or a transmitting terminal that makes a determination whether the degree of congestion has increased or decreased as recited by claim 2. This argument is not persuasive.

Yoshinori discloses a system that determines network congestion. Yoshinori discloses that a receiving terminal measures the transfer rate and other coding conditions (paragraph 10). Yoshinori discloses that the transmitting terminal receives coding conditions and adjusts the transmission accordingly (paragraphs 23-24). The transmitter decodes the received codes and based on this information **determines** whether congestion is increasing or decreasing and encodes following data accordingly (paragraphs 25-26). Determine is defined as establish after investigation, or calculation (American Heritage College Dictionary 4<sup>th</sup> Edition). It does not appear that Applicant has defined determine anywhere in the specification that would prevent a broad and reasonable interpretation.

Applicant's citation of paragraph 36 of Yoshinori explains certain functions of the receiving terminal, it does not disclose that the transmitting terminal makes no determinations as to congestion. The abstract of Yoshinori is more on point, "The data transmission control section 13b controls the operation of a coding processing section [...] to control an output of coded data". In Yoshinori the transmitting terminal establishes an increase or decrease in congestion by changing the encoding scheme based on the coding information received from the receiving terminal, thus it makes a determination that the degree of congestion is increasing or decreasing, and based on

the codes received the transmitting terminal can determine the degree of the congestion.

5. Applicant argues that Yoshinori does not disclose a transmitting-side information terminal that determines the degree of congestion as recited by claims 1 and 3. This argument is not persuasive because Yoshinori does disclose a transmitting terminal that determines whether congestion is increasing or decreasing as discussed above.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 2, 4 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshinori JP 2001-094981.

Regarding claim 2, Yoshinori discloses “sequentially transferring [...] data frame amounting to one still picture containing compressed image data of variable length and compressed audio data of variable length” as two terminals transmitting in real-time encoded images and voice (paragraph 10), “transmitting a multiplicity of leading data frames with predetermined image and sound qualities” as transmitting encoded data

(paragraph 10) the type of coding selected will determine the quality, "determining a degree of congestion of said data circuit from the data reception time" as the transmitting terminal recognizes that the transfer rate has changed based on the received codes (paragraphs 10, 23-26), "making a determination that the degree of congestion of said data circuit has increased [...] thereby transmitting the next data frame with reduced image and sound qualities" as decoding coding conditions and changing how data is transmitted (paragraph 15, 25-26), and "making a determination that the degree of congestion of said data circuit has decreased [...] thereby transmitting the next data frame with increased image and sound qualities" as decoding coding conditions and then encoding data with the new parameters (paragraph 25-26).

Regarding claim 4 depending from claim 2, Yoshinori discloses "communications terminal receiving frame data has a data reception time measurement and data transmission function" as a terminal that can recognize transfer rate (time measurement) and notify transmitting terminal of conditions (pg. 5 paragraph 10).

Regarding claim 11 depending from claim 2, Yoshinori discloses "maintain a constant quality of said frame data to be transmitted such that [...] the picture and sound reproduced from said frame data are recognizable" as generating coding conditions which suit real-time reproduction of data (pg. 6 paragraph 14), successfully reproducing the data inherently includes that the data can be recognized.

Regarding claim 12 depending from claim 2, Yoshinori inherently discloses "said picture quality is given by the data compression rate and picture size" as encoding an image of a certain screen size (pg. 5 paragraph 10) the quality will necessarily be dependent upon the original size and the amount of compression used, and "said sound quality is given by the data compression rate of relevant sound data" the same is true for sound data.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,3-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Barham et al. US2004/0003107 A1.

Regarding claim 1, Yoshinori does not specifically disclose "determining the degree of congestion of said data circuit from the data transmission time" however this is taught by Barham as measuring network capacity by measuring transmission time (paragraph 13). The remainder of claim 1 is the same as claim 2 and is therefore rejected for the same reasons.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori with Barham. The motivation is to rapidly detect network congestion, by measuring transmit time instead of receive time one is able to get a congestion measurement immediately rather than waiting for the data to be received.

Regarding claim 3, Yoshinori does not disclose "calculating a ratio (data reception time)/(data transmission time) [and determining the degree of congestion from said ratio]" but Yoshinori does teach using data reception time and transfer rate to calculate congestion (paragraph 10) and Barham teaches using data transmission time to detect network load (paragraph 13). It would have been obvious to combine the two to use both measurements to measure network congestion, the motivation is to constantly measure network load instead of just at the transmitting or receiving end.

Regarding claim 4 depending from claims 1 or 3, Yoshinori discloses "communications terminal receiving frame data has a data reception time measurement and data transmission function" as a terminal that can recognize transfer rate (time measurement) and notify transmitting terminal of conditions (pg. 5 paragraph 10).

Regarding claim 5, Yoshinori does not disclose "data transmission time is the time interval from the beginning of the transmission of data frame that precedes the



current data frame by at least one frame and the end of said transmission" however this is taught by Barham as measuring the interval from the time the packet is sent to the network to the time transmission is completed (pg. 2 paragraph 13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori with Barham. The motivation is to rapidly detect network congestion.

Regarding claim 11 depending from claim 1 or 3, Yoshinori discloses "maintain a constant quality of said frame data to be transmitted such that [...] the picture and sound reproduced from said frame data are recognizable" as generating coding conditions which suit real-time reproduction of data (pg. 6 paragraph 14), successfully reproducing the data inherently includes that the data can be recognized.

Regarding claim 12 depending from claim 1 or 3, Yoshinori inherently discloses "said picture quality is given by the data compression rate and picture size" as encoding an image of a certain screen size (pg. 5 paragraph 10) the quality will necessarily be dependent upon the original size and the amount of compression used, and "said sound quality is given by the data compression rate of relevant sound data" the same is true for sound data.

5. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Takahara et al. U.S. Pat. 5,477,542.

Regarding claim 6, Yoshinori does not disclose "data reception time is the time interval from the beginning of the reception of data frame that precedes the current data frame by at least one frame and the end of said reception" however this is taught by Takahara as a received packet transmission time (col. 6 ln. 40-52).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori with Takahara. The motivation to combine is to detect network congestion.

Regarding claim 10 depending from claim 2, Yoshinori does not disclose "data communications terminal prioritizes the sound quality over the frame rate" however this is taught by Takahara as maintaining voice data when the network is congested by lowering video data, thus maintaining frame rate for audio data (col. 2 ln. 12-38).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori with Takahara. The motivation to combine is to maintain a minimum quality of data such that the transmission is useful.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Barham and in further view of Takahara.

Regarding claim 10 depending from claim 1 or 3, Yoshinori and Barham disclose the limitations of claims 1 and 3 but do not disclose "data communications terminal prioritizes the sound quality over the frame rate" however this is taught by Takahara as maintaining voice data when the network is congested by lowering video data, thus maintaining frame rate for audio data (col. 2 ln. 12-38).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori and Barham with the Takahara. The motivation to combine is to maintain a minimum quality of data such that the transmission is useful.

7. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Barham and in further view of Brabson et al. US2003/0135638 A1.

Regarding claim 7, Yoshinori discloses a data communications terminal that will "make a determination that the degree of congestion of said data circuit has increased [...] when said data transmission time is increasing, thereby transmitting the next data frame with [...] a reduced picture size, and/or a reduced frame rate" as generating coding conditions, such as frame rate and screen size, which suit reproduction of data (pg. 5 paragraph 10), and "make a determination that the degree of

congestion of said data circuit has decreased [...] thereby transmitting the next data frame with reduced data compression rate, an increased picture size, and/or an increased frame rate" as generating coding conditions which suit reproduction of data (pg. 5 paragraph 10). Yoshinori and Barham do not disclose transmitting data "with an increased data compression rate" or "reduced data compression rate" in response to network congestion, however this is taught by Brabson as transcoding a file in response to network conditions (pg. 4 paragraph 46) and doing the opposite when network conditions improve (pg. 3 paragraph 42, pg. 11 paragraph 127).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoshinori with Brabson, the motivation for doing so is to avoid network congestion.

Regarding claim 9, Yoshinori discloses a data communications terminal that will "make a determination that the degree of congestion of said data circuit has increased [...] when said ratio (data reception time)/(data transmission time) is increasing, thereby transmitting the next data frame with [...] a reduced picture size, and/or a reduced frame rate" as generating coding conditions, such as frame rate and screen size, which suit reproduction of data (pg. 5 paragraph 10), and "make a determination that the degree of congestion of said data circuit has decreased [...] thereby transmitting the next data frame with reduced data compression rate, an increased picture size, and/or an

increased frame rate” as generating coding conditions which suit reproduction of data (pg. 5 paragraph 10). Yoshinori and Barham do not disclose transmitting data “with an increased data compression rate” or “reduced data compression rate” in response to network congestion, however this is taught by Brabson as transcoding a file in response to network conditions (pg. 4 paragraph 46) and doing the opposite when network conditions improve (pg. 3 paragraph 42, pg. 11 paragraph 127).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoshinori with Brabson, the motivation for doing so is to avoid network congestion.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Brabson.

Regarding claim 8, Yoshinori discloses a data communications terminal that will “make a determination that the degree of congestion of said data circuit has increased [...] when said data transmission time is increasing, thereby transmitting the next data frame with [...] a reduced picture size, and/or a reduced frame rate” as generating coding conditions, such as frame rate and screen size, which suit reproduction of data (pg. 5 paragraph 10), and “make a determination that the degree of congestion of said data circuit has decreased [...] thereby transmitting the next data frame with reduced

data compression rate, an increased picture size, and/or an increased frame rate" as generating coding conditions which suit reproduction of data (pg. 5 paragraph 10).

Yoshinori does not disclose transmitting data "with an increased data compression rate" or "reduced data compression rate" in response to network congestion, however this is taught by Brabson as transcoding a file in response to network conditions (pg. 4 paragraph 46) and doing the opposite when network conditions improve (pg. 3 paragraph 42, pg. 11 paragraph 127).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoshinori with Brabson, the motivation for doing so is to avoid network congestion.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Barham et al. US 2003/0097461 A1 discloses a method for controlling network congestion where transmission terminals (routers) determine network congestion.

Grosdidier et al. U.S. Pat. 7,072,297 B2 discloses adjusting bandwidth in response to network congestion. The congestion determination is made at multiple points in the data path.

Kamiya U.S. Pat. 6,438,138 B1 discloses a virtual terminal that transmits data and makes a network congestion determination from within the terminal (Fig. 10).

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Recek whose telephone number is (571) 270-1975. The examiner can normally be reached on Mon - Thurs 8:30am-5:00pm.

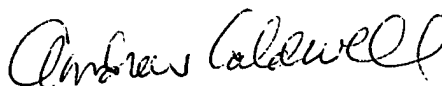
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andy Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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ANDREW CALDWELL  
SUPERVISORY PATENT EXAMINER